

ABSTRACT OF THE DISCLOSURE

A processing apparatus has a reduced volume of a process chamber by simplifying a support structure of a substrate placement stage so as to perform a high-speed gas exchange. The process chamber made of metal applies a process to an object to be processes placed in the process chamber by supplying a process gas to the object to be processed. A placement stage made of ceramics or a metal matrix composite is located inside the process chamber so that the object to be processed is placed thereon. A heating device is incorporated into the placement stage. A support member made of a metal matrix composite supports the placement stage. A seal member is located between the support member and a wall surface of the process chamber. A cooling mechanism is located in the vicinity of the seal member so as to cool the seal member.